

### REMARKS

Applicant appreciates the Examiner's thorough examination of the present application as evidenced by the Office Action of April 24, 2003 (hereinafter "Office Action"). In response, Applicant has canceled Claims 1 - 5 without prejudice or disclaimer. Applicant respectfully submits that the cited references fail to disclose or suggest at least the recitations of independent Claims 6, 15, and 25. Therefore, Applicant respectfully submits that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

#### **Independent Claims 6, 15, and 25 are Patentable**

Independent Claims 6, 15, and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 6,548,357 to Weybright *et al.* (hereinafter "Weybright") in view of U. S. Patent No. 6,013,569 to Lur *et al.* (hereinafter "Lur"). A determination under §103 that an invention would have been obvious to someone of ordinary skill in the art is a conclusion of law based on fact. *Panduit Corp. v. Dennison Mfg. Co.* 810 F.2d 1593, 1 U.S.P.Q.2d 1593 (Fed. Cir. 1987), *cert. denied*, 107 S.Ct. 2187. After the involved facts are determined, the decision maker must then make the legal determination of whether the claimed invention as a whole would have been obvious to a person having ordinary skill in the art at the time the invention was unknown, and just before it was made. *Id.* at 1596. The United States Patent and Trademark Office (USPTO) has the initial burden under §103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

To establish a *prima facie* case of obviousness, the prior art reference or references when combined must teach or suggest *all* the recitations of the claims, and there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. M.P.E.P. §2143. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. M.P.E.P. §2143.01, citing *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). As recently emphasized by the Court of Appeals for the

Federal Circuit, to support combining references, evidence of a suggestion, teaching, or motivation to combine must be **clear and particular**, and this requirement for clear and particular evidence is not met by broad and conclusory statements about the teachings of references. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). In an even more recent decision, the Court of Appeals for the Federal Circuit has stated that, to support combining or modifying references, there must be **particular** evidence from the prior art as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

Independent Claim 25, for example, is directed to a method of manufacturing an integrated circuit and includes the following recitations:

forming a gate electrode on a substrate;  
forming a first insulating layer on the gate electrode;  
forming a second insulating layer on the first insulating layer and the substrate;  
forming a protective layer on the second insulating layer such that the second insulating layer is enclosed by the protective layer, the first insulating layer, and the substrate.

The Office Action acknowledges that Weybright does not disclose or suggest forming the protective or capping layer on the second insulating layer so that the second insulating layer is enclosed. (Office Action, page 5). The Office Action does state, however, that Lur provides the teachings missing from Weybright. (Office Action, page 5).

Applicant respectfully submits that neither Weybright nor Lur contains any particular evidence as to the desirability of modifying the device structure of Weybright to include an additional capping or protective layer to enclose a second insulating layer as recited, for example, in independent Claims 6, 15, and 25. Turning now to the Weybright reference, the Office Action states that the mask layer 32 shown, for example, in **FIG. 9** of Weybright, corresponds to the second insulating layer recited in independent Claims 6, 15, and 27. According to Weybright, the mask layer 32 is used to form the openings 34 for bitline contacts and then the mask is stripped from the device structure as shown in **FIG. 10** (*see*, Weybright, col. 9, lines 31 - 58).

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Because the mask layer **32** is used as an etching mask and is then removed, Applicant respectfully submits that rather than containing any particular evidence as to the desirability of enclosing the mask layer **32** with a capping or protective layer, Weybright teaches against such a modification as such layers would only provide additional layers to be removed and/or the layers would be removed during an etching process.

Applicant respectfully submits, therefore, that the combination of Weybright and Lur is improper as neither Weybright nor Lur contains any particular evidence as to the desirability of modifying Weybright's device structure to include a capping or protective layer that encloses the mask layer **32** shown in **FIG. 9** of Weybright. Accordingly, for at least these reasons, Applicant submits that independent Claims 6, 15, and 25 are patentable over Weybright and Lur and that Claims 7 - 14, 16 - 24, and 26 - 28 are patentable at least as they depend from an allowable claim.


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### CONCLUSION

In light of the above amendments and remarks, Applicant respectfully submits that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

It is not believed that an extension of time and/or additional fee(s), including fees for net addition of claims, are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper may be charged to our Deposit Account No. 50-0220.

Respectfully submitted,

  
D. Scott Moore  
Registration No. 42,011

**Correspondence Address:**




**20792**

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### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on July 22, 2003.

  
Traci A. Brown